

05/22

# 8

ENTERED

See page 6



OIPE

**RAW SEQUENCE LISTING**  
**PATENT APPLICATION: US/10/046,924**

**DATE: 01/27/2003**  
**TIME: 12:11:50**

**Input Set : D:\seqlist.txt**  
**Output Set: N:\CRF4\01272003\J046924.raw**

```

4 <110> APPLICANT: Cases, Sylvaine
5     Stone, Scot
6     Zhou, Ping
7     Farese, Robert V.
8     Chi-Liang Eric Yen
10 <120> TITLE OF INVENTION: DIACYLGLYCEROL O-ACYLTRANSFERASE 2a
11     (DGAT2a)
14 <130> FILE REFERENCE: UCAL240CIP
16 <140> CURRENT APPLICATION NUMBER: US 10/046,924
C--> 17 <141> CURRENT FILING DATE: 2003-01-14
19 <150> PRIOR APPLICATION NUMBER: 60/271,307
20 <151> PRIOR FILING DATE: 2001-02-23
22 <150> PRIOR APPLICATION NUMBER: 09/794,715
23 <151> PRIOR FILING DATE: 2001-02-26
25 <160> NUMBER OF SEQ ID NOS: 18
27 <170> SOFTWARE: FastSEQ for Windows Version 4.0
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30 <211> LENGTH: 1231
31 <212> TYPE: DNA
32 <213> ORGANISM: Homo sapiens
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36 cgaggctgac cggagccagc gctctcacgg aggaccctgt tcgcgcgagg ggtctgggag    120
37 atggggcact ggatccagca tcctctccgc cctccaggac ctcttctctg tcacctggct    180
38 caataaggctcc aagggtggaaa agcagctaca ggtcatctca gtgctccagt gggctctgtc  240
39 ctcccttgta ctgggagtgg cctgcagtgc catcctcatg tacatattct gcaactgattg   300
40 ctggctcatc gctgtgctct acttcacttg gctgggttt gactggaaca caccgaagaa   360
41 agtgtggcagg aggtcacagt gggtccgaaa ctgggctgtg tggcgtact ttcgagacta  420
42 cttcccccattc cagctggta agacacacaaa cctgctgacc accaggaact atatctttgg 480
43 ataccaccccc catggtatca tgggcctggg tgccttctgc aacttcagca cagaggccac 540
44 agaagtggac aagaagttcc caggcatacg gccttacctg gctacactgg caggcaactt  600
45 ccgaatgcct gtgttgggg agtacctgat gtctggaggt atctgccctg tcagccggga  660
46 caccatagac tatttgcttt caaagaatgg gagtggaat gctatcatca tcgtggtcgg  720
47 gggtgcggct gagtctctga gctccatgcc tggcaagaat gcagtcaccc tgccgaaccg  780
48 caagggtctt gtgaaactgg ccctgcgtca tggagctgac ctgggtccca tctactcctt  840
49 tggagagaat gaagtgtaca agcaggtgat cttcgaggag ggctcctggg gccgatgggt  900
50 ccagaagaag ttccagaaat acattggttt cgcccccattgc atcttccatg gtcgaggcct  960
51 cttctccctcc gacacctggg ggctgggtgcc ctactccaag cccatcacca ctgttgggg 1020
52 agagcccatc accatccccca agctggagca cccaaacccag caagacatcg acctgtacca 1080
53 caccatgtac atggaggccc tggtaagct cttcgacaag cacaagacca agttccgcct  1140
54 cccggagact gaggtcctgg aggtgaactg agccagcctt cggggccaat tccctggagg 1200
55 aaccagctgc aaatcaactt tttgctctgt a                                         1231
57 <210> SEQ ID NO: 2

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RAW SEQUENCE LISTING  
PATENT APPLICATION: US/10/046,924

DATE: 01/27/2003  
TIME: 12:11:50

Input Set : D:\seqlist.txt  
Output Set: N:\CRF4\01272003\J046924.raw

58 <211> LENGTH: 388  
59 <212> TYPE: PRT  
60 <213> ORGANISM: Homo sapiens  
62 <400> SEQUENCE: 2  
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64 1 5 10 15  
65 Gln Ala Glu Ala Asp Arg Ser Gln Arg Ser His Gly Gly Pro Ala Leu  
66 20 25 30  
67 Ser Arg Glu Gly Ser Gly Arg Trp Gly Thr Gly Ser Ser Ile Leu Ser  
68 35 40 45  
69 Ala Leu Gln Asp Leu Phe Ser Val Thr Trp Leu Asn Arg Ser Lys Val  
70 50 55 60  
71 Glu Lys Gln Leu Gln Val Ile Ser Val Leu Gln Trp Val Leu Ser Phe  
72 65 70 75 80  
73 Leu Val Leu Gly Val Ala Cys Ser Ala Ile Leu Met Tyr Ile Phe Cys  
74 85 90 95  
75 Thr Asp Cys Trp Leu Ile Ala Val Leu Tyr Phe Thr Trp Leu Val Phe  
76 100 105 110  
77 Asp Trp Asn Thr Pro Lys Lys Gly Gly Arg Arg Ser Gln Trp Val Arg  
78 115 120 125  
79 Asn Trp Ala Val Trp Arg Tyr Phe Arg Asp Tyr Phe Pro Ile Gln Leu  
80 130 135 140  
81 Val Lys Thr His Asn Leu Leu Thr Thr Arg Asn Tyr Ile Phe Gly Tyr  
82 145 150 155 160  
83 His Pro His Gly Ile Met Gly Leu Gly Ala Phe Cys Asn Phe Ser Thr  
84 165 170 175  
85 Glu Ala Thr Glu Val Ser Lys Lys Phe Pro Gly Ile Arg Pro Tyr Leu  
86 180 185 190  
87 Ala Thr Leu Ala Gly Asn Phe Arg Met Pro Val Leu Arg Glu Tyr Leu  
88 195 200 205  
89 Met Ser Gly Gly Ile Cys Pro Val Ser Arg Asp Thr Ile Asp Tyr Leu  
90 210 215 220  
91 Leu Ser Lys Asn Gly Ser Gly Asn Ala Ile Ile Val Val Gly Gly  
92 225 230 235 240  
93 Ala Ala Glu Ser Leu Ser Ser Met Pro Gly Lys Asn Ala Val Thr Leu  
94 245 250 255  
95 Arg Asn Arg Lys Gly Phe Val Lys Leu Ala Leu Arg His Gly Ala Asp  
96 260 265 270  
97 Leu Val Pro Ile Tyr Ser Phe Gly Glu Asn Glu Val Tyr Lys Gln Val  
98 275 280 285  
99 Ile Phe Glu Glu Gly Ser Trp Gly Arg Trp Val Gln Lys Lys Phe Gln  
100 290 295 300  
101 Lys Tyr Ile Gly Phe Ala Pro Cys Ile Phe His Gly Arg Gly Leu Phe  
102 305 310 315 320  
103 Ser Ser Asp Thr Trp Gly Leu Val Pro Tyr Ser Lys Pro Ile Thr Thr  
104 325 330 335  
105 Val Val Gly Glu Pro Ile Thr Ile Pro Lys Leu Glu His Pro Thr Gln  
106 340 345 350  
107 Gln Asp Ile Asp Leu Tyr His Thr Met Tyr Met Glu Ala Leu Val Lys

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Input Set : D:\seqlist.txt  
Output Set: N:\CRF4\01272003\J046924.raw

108	355	360	365	
109	Leu Phe Asp Lys His Lys Thr Lys Phe Gly Leu Pro Glu Thr Glu Val			
110	370	375	380	
111	Leu Glu Val Asn			
112	385			
114	<210> SEQ ID NO: 3			
115	<211> LENGTH: 1167			
116	<212> TYPE: DNA			
117	<213> ORGANISM: Mus musculus			
119	<220> FEATURE:			
120	<221> NAME/KEY: misc_feature			
121	<222> LOCATION: (1)...(1167)			
122	<223> OTHER INFORMATION: n = A,T,C or G			
124	<400> SEQUENCE: 3			
125	atgaagaccc tcatcgccgc ctactccggg gtcctgcggg gtgagcgtcg ggccgaagct		60	
126	gcccgccagcg aaaacaagaa taaaggatct gccctgtcac gcgaggggtc tgggcgtatgg		120	
127	ggcactggct ccagcatcct ctcagccctc caagacatct tctctgtcac ctggctcaac		180	
128	agatcyaagg tggaaaaaca gctgcaggtc atctcagtac tacaatgggt cctatccttc		240	
129	ctgggtctag gagttggctg cagtgtcatc ctcatgtaca ccttctgcac agactgctgg		300	
130	ctgatagctg tgctctactt cacctggctg gcatttgact ggaacacgccc caagaaaggt		360	
131	gcaaggagat cgcaagtgggt gcgaaaactgg gccgtgtggc gctacttccg agactacttt		420	
132	cccatccagc tggtaagac acacaacctg ctgaccacca ggaactataat cttggatac		480	
133	cacccccatg gcatcatggg cctgggtgcc ttctgttaact tcagcacaga ggctactgaa		540	
134	gtcagcaaga agttcctgg cataaggccc tatttggcta cggtggcygg taacttccgg		600	
135	atgcctgtgc ttgcgagta cctgatgtct ggaggcatct gccctgtcaa ccgagacacc		660	
136	atagactact tgctctccaa gaatgggagt ggcaatgcta tcatcatcgt ggtggaggt		720	
137	gcagctgagt ccctgagctc catgcctggc aagaacgcag tcaccctgaa gaaccgcaaa		780	
138	gcctttgtga agctggccct gcgccatgga gctgatctgg ttcccactta ttcccttgga		840	
139	gagaatgagg tatacaagca ggtgatctt gaggagggtt cctggggccg atgggtccag		900	
140	aagaagttcc agaagtatat tggttcgcc ccctgcatct tccatggccg aggctcttc		960	
141	tcctctgaca cctgggggct ggtgcctac tccaagccca tcaccaccgt cgtgggggag		1020	
142	cccatcactg tccccaaagct ggagcacccg acccagaaag acatcgacct gtaccatgcc		1080	
W-->	143 atgtacatgg aggccctggt gaagctcttt gacaatcaca agacccaaatt tggcctncca		1140	
144	gagactgagg tgctggaggt gaactga		1167	
146	<210> SEQ ID NO: 4			
147	<211> LENGTH: 387			
148	<212> TYPE: PRT			
149	<213> ORGANISM: Mus musculus			
151	<400> SEQUENCE: 4			
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153	1 5 10 15			
154	Arg Ala Glu Leu Pro Ala Ala Lys Asn Lys Asn Lys Gly Ser Ala Leu			
155	20 25 30			
156	Ser Arg Glu Gly Ser Gly Arg Trp Gly Thr Gly Ser Ser Ile Leu Ser			
157	35 40 45			
158	Ala Leu Gln Asp Ile Phe Ser Val Thr Trp Leu Asn Arg Ser Lys Val			
159	50 55 60			
160	Glu Lys Gln Leu Gln Val Ile Ser Val Leu Gln Trp Val Leu Ser Phe			
161	65 70 75 80			

RAW SEQUENCE LISTING  
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Input Set : D:\seqlist.txt  
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162	Leu	Val	Leu	Gly	Val	Ala	Cys	Ser	Val	Ile	Leu	Met	Tyr	Thr	Phe	Cys
163				85					90							95
164	Thr	Asp	Cys	Trp	Leu	Ile	Ala	Val	Leu	Tyr	Phe	Thr	Trp	Leu	Ala	Phe
165				100					105							110
166	Asp	Trp	Asn	Thr	Pro	Lys	Lys	Gly	Gly	Arg	Arg	Ser	Gln	Trp	Val	Arg
167				115				120							125	
168	Asn	Trp	Ala	Val	Trp	Arg	Tyr	Phe	Arg	Asp	Tyr	Phe	Pro	Ile	Gln	Leu
169				130				135							140	
170	Val	Lys	Thr	His	Asn	Leu	Leu	Thr	Thr	Arg	Asn	Tyr	Ile	Phe	Gly	Tyr
171	145					150				155						160
172	His	Pro	His	Gly	Ile	Met	Gly	Leu	Gly	Ala	Phe	Cys	Asn	Phe	Ser	Thr
173						165				170						175
174	Glu	Ala	Thr	Glu	Val	Ser	Lys	Lys	Phe	Pro	Gly	Ile	Arg	Pro	Tyr	Leu
175						180			185						190	
176	Ala	Thr	Leu	Ala	Gly	Asn	Phe	Arg	Met	Pro	Val	Leu	Arg	Glu	Tyr	Leu
177						195			200						205	
178	Met	Ser	Gly	Gly	Ile	Cys	Leu	Val	Asn	Arg	Asp	Thr	Ile	Asp	Tyr	Leu
179						210			215						220	
180	Leu	Ser	Lys	Asn	Gly	Ser	Gly	Asn	Ala	Ile	Ile	Val	Val	Gly	Gly	
181						225			230			235			240	
182	Ala	Ala	Glu	Ser	Leu	Ser	Ser	Met	Pro	Gly	Lys	Asn	Ala	Val	Thr	Leu
183						245			250			255				
184	Lys	Asn	Arg	Lys	Gly	Phe	Val	Lys	Leu	Ala	Leu	Arg	His	Gly	Ala	Asp
185						260			265			270				
186	Leu	Val	Pro	Thr	Tyr	Ser	Phe	Gly	Glu	Asn	Glu	Val	Tyr	Lys	Gln	Val
187						275			280			285				
188	Ile	Phe	Glu	Glu	Gly	Ser	Trp	Gly	Arg	Trp	Val	Lys	Lys	Phe	Gln	Lys
189						290			295			300				
190	Tyr	Ile	Gly	Phe	Ala	Pro	Cys	Ile	Phe	His	Gly	Arg	Gly	Leu	Phe	Ser
191						305			310			315			320	
192	Ser	Asp	Thr	Trp	Gly	Leu	Val	Pro	Tyr	Ser	Lys	Pro	Ile	Thr	Thr	Val
193						325			330			335				
194	Val	Gly	Glu	Pro	Ile	Thr	Val	Pro	Lys	Leu	Glu	His	Pro	Thr	Gln	Lys
195						340			345			350				
196	Asp	Ile	Asp	Leu	Tyr	His	Ala	Met	Tyr	Met	Glu	Ala	Leu	Val	Lys	Leu
197						355			360			365				
198	Phe	Asp	Asn	His	Lys	Thr	Lys	Phe	Gly	Leu	Pro	Glu	Thr	Glu	Val	Leu
199						370			375			380				
200	Glu	Val	Asn													
201	385															
203	<210>	SEQ ID NO:	5													
204	<211>	LENGTH:	1008													
205	<212>	TYPE:	DNA													
206	<213>	ORGANISM:	Mus musculus													
208	<400>	SEQUENCE:	5													
209	atgatggtcg	agttcgcgcc	actcaacacc	ccgctggcac	ggtgccata	gaccgctg	cgt									60
210	gtgctgcagt	gggtcctgtc	cttcctcctg	ctcgatgcagg	tgtgcattgg	aattatgg	ttt									120
211	atgatggtc	tgtacaacta	ttggatccctt	tacatccat	atctggatcg	gttttactat	ttt									180
212	gactggagaa	ccccagagca	aggaggcaga	agatggact	gggtccaaag	ctggcctgt	ttt									240

RAW SEQUENCE LISTING  
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DATE: 01/27/2003  
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Input Set : D:\seqlist.txt  
Output Set: N:\CRF4\01272003\J046924.raw

213	tggaggatt	ttaaggagta	tttccaatc	tgtctgtca	aaacgcagga	tttgatccg	300										
214	ggtcacaatt	atatatttgg	gttccacctt	catggaatat	tcgtgcctgg	agccttggaa	360										
215	aatttttcta	caaaaatactc	ggacttcaag	aagctatttc	ctggcttac	atcgatatctc	420										
216	cacgtggcca	agatctggtt	ctgtttcccgg	ttgttccgag	aatatctgtat	gagtaacggg	480										
217	ccggtttcag	tgtctaaggaa	gagtttgcgtt	catgtgcgtat	gcaaggatgg	aggtgtggcaat	540										
218	gtctcaatca	ttgtcctcgg	aggtgcaaaag	gaggcgctgg	aggctcaccc	aggaacattc	600										
219	accctgtgca	tccgccagcg	caaagggtttt	gttaagatgg	ccttgaccca	tggtgcctgt	660										
220	ttgggtccag	tatttctttt	ttgtgaaaat	gatctatata	agcaaattaa	caacccccaaa	720										
221	ggctcctggc	tacgaactat	acaagacgca	atgtatgatt	caatggaggt	agccttgccca	780										
222	ctgatataatg	ccagaggaat	tttccagcac	tactttggca	taatgcctta	tcggaagctg	840										
223	atctacactg	ttgttggccg	ccctatccct	gttcagcaga	ttctgaaccc	gacctcagag	900										
224	cagattgaag	agctgcata	gacataccta	gaggagctaa	agaaaactatt	caatgaacac	960										
225	aaaggaaat	atgggattcc	ggagcacgaa	actctggtat	ttaaataaa		1008										
227	<210>	SEQ ID NO:	6														
228	<211>	LENGTH:	335														
229	<212>	TYPE:	PRT														
230	<213>	ORGANISM:	Mus musculus														
232	<400>	SEQUENCE:	6														
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234	1			5			10				15						
235	Gln	Thr	Ala	Ala	Val	Leu	Gln	Trp	Val	Leu	Ser	Phe	Leu	Leu	Leu	Val	
236					20				25				30				
237	Gln	Val	Cys	Ile	Gly	Ile	Met	Val	Met	Leu	Val	Leu	Tyr	Asn	Tyr	Trp	
238					35				40			45					
239	Phe	Leu	Tyr	Ile	Pro	Tyr	Leu	Val	Trp	Phe	Tyr	Tyr	Asp	Trp	Arg	Thr	
240					50				55		60						
241	Pro	Glu	Gln	Gly	Gly	Arg	Arg	Trp	Asn	Trp	Val	Gln	Ser	Trp	Pro	Val	
242		65				70				75			80				
243	Trp	Lys	Tyr	Phe	Lys	Glu	Tyr	Phe	Pro	Ile	Cys	Leu	Val	Lys	Thr	Gln	
244					85				90			95					
245	Asp	Leu	Asp	Pro	Gly	His	Asn	Tyr	Ile	Phe	Gly	Phe	His	Pro	His	Gly	
246					100				105			110					
247	Ile	Phe	Val	Pro	Gly	Ala	Phe	Gly	Asn	Phe	Cys	Thr	Lys	Tyr	Ser	Asp	
248					115				120			125					
249	Phe	Lys	Lys	Leu	Phe	Pro	Gly	Phe	Thr	Ser	Tyr	Leu	His	Val	Ala	Lys	
250					130				135			140					
251	Ile	Trp	Phe	Cys	Phe	Pro	Leu	Phe	Arg	Glu	Tyr	Leu	Met	Ser	Asn	Gly	
252					145				150			155			160		
253	Pro	Val	Ser	Val	Ser	Lys	Glu	Ser	Leu	Ser	His	Val	Leu	Ser	Lys	Asp	
254					165				170			175					
255	Gly	Gly	Gly	Asn	Val	Ser	Ile	Ile	Val	Leu	Gly	Gly	Ala	Lys	Glu	Ala	
256					180				185			190					
257	Leu	Glu	Ala	His	Pro	Gly	Thr	Phe	Thr	Leu	Cys	Ile	Arg	Gln	Arg	Lys	
258					195				200			205					
259	Gly	Phe	Val	Lys	Met	Ala	Leu	Thr	His	Gly	Ala	Ser	Leu	Val	Pro	Val	
260					210				215			220					
261	Phe	Ser	Phe	Gly	Glu	Asn	Asp	Leu	Tyr	Lys	Gln	Ile	Asn	Asn	Pro	Lys	
262		225				230				235			240				
263	Gly	Ser	Trp	Leu	Arg	Thr	Ile	Gln	Asp	Ala	Met	Tyr	Asp	Ser	Met	Gly	

RAW SEQUENCE LISTING ERROR SUMMARY                   DATE: 01/27/2003  
PATENT APPLICATION: US/10/046,924                   TIME: 12:11:51

Input Set : D:\seqlist.txt  
Output Set: N:\CRF4\01272003\J046924.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:3; N Pos. 1137  
Seq#:9; N Pos. 341

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/046,924

DATE: 01/27/2003

TIME: 12:11:51

Input Set : D:\seqlist.txt

Output Set: N:\CRF4\01272003\J046924.raw

L:17 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:143 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:1080

L:367 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:300